3201602/5P

Arboricultural Impact Assessment

in Respect of Proposal to Construct 4no. Detached Residential Units at

Bennetts Close, Wiswell Lane, Whalley, Lancashire, BB7 9AF

Prepared by:

Bowland Tree Consultancy Ltd

August 2013

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Bowland Tree Consultancy Ltd

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Site:	Bennetts Close, Wiswell Lane, Whalley, Lancashire, BB7 9AF
Survey Date:	26 July 2013
Report Date:	21 August 2013
Prepared By:	Phill Harris – Chartered Arboriculturist
Report Ref:	BTC514
Agent for Client:	Avalon Town Planning

Introduction and Rationale. Bowland Tree Consultancy Ltd was instructed to carry out an appraisal of the potential for the construction of a residential development at the above site to impact upon trees and, in turn, to advise on appropriate protective measures for retained trees during development and on facilitation pruning and/or felling works where identified as necessary. Further to this instruction I confirm that I visited the site on 26 July 2013 and carried out a survey of trees in accordance with BS5837:2012 - Trees in Relation to Design, Demolition and Construction – Recommendations, and our disclaimer at page 5.

In this respect I set out a brief overview of my observations, findings and recommendations below, along with comments on any issues raised. I also enclose a Tree Survey Schedule (TSS) detailing specific tree related information, a Tree Constraints Plan (TCP), and a Tree Impact Plan (TIP). The TCP shows the existing site under consideration with pertinent tree constraints detailed, and the TIP also has an overlay of the proposed development with associated tree impacts indicated. The plans are based upon scaled electronic topographical survey based plans provided by the client's agent, Avalon Town Planning, and, for the purpose of this report, I presume the details of the plans provided to be accurate.

The Site and the Proposal. The site under consideration is located in a suburban/rural edge area in the village of Whalley, within the administrational boundaries of Ribble Valley Borough Council. It currently consists of a large garden to a detached two-storey residential property. The site is roughly triangular in shape, and is bordered to the north by Wiswell Lane, to the east by the A671, and to the south by Oakhill College and its associated land (see TIP). Vehicular access is from Wiswell Lane to the north (see Fig. 1, below).

Fig. 1: Existing site access, as seen from the west looking east, with Copper Beech T22 to centre

Fig. 2: Eastern section of site, as seen from the south looking north, with woodland W1 to right

I am informed by the client's agents, Avalon Town Planning, that the proposal is to construct four detached residential properties with associated garages, hard-surfacing and outdoor amenity space, and to retain the existing vehicular access point, as detailed on the TIP.

The Trees. 27 individual trees (prefixed 'T'), two groups of trees (prefixed 'G'), three woodlands (prefixed 'W'), and one hedge (prefixed ' H') were surveyed in respect of the proposal and its associated potential to impact upon said vegetation, and the respective constraints of these items are plotted on the appended TIP. I have not been informed if any of the trees are the subject of a Tree Preservation Order (TPO) or if the site

stands within the boundaries of a Conservation Area (CA). As such, it is therefore essential to contact the planning office at Ribble Valley Borough Council with regard to the presence of any such statutory tree protection prior to scheduling or carrying out any tree works.

The surveyed vegetation consists of various deciduous and evergreen broadleaf and evergreen coniferous species including Beech, Norway Maple, Holly and Lawson Cypress. The trees are in the young to post-mature age range and stand at heights of up to approximately 28 metres, have maximum diametrical crown spreads of up to approximately 25.5 metres and stem diameters of up to approximately 900 millimetres. Tree dimensions and other pertinent information such as structural defects and physiological deficiencies, along with recommendations for remedial management works, are included in the TSS attached.

The trees were appraised in accordance with BS5837:2012 Table 1 (appended) and, as detailed in Table A (below), one of the trees and three of the woodlands were allocated a high retention value of 'A', four of the trees were allocated a moderate retention value of 'B', and 16 of the trees, the two groups and the hedge were allocated a low retention value of 'C'. In addition, six of the trees were classed as being unsuitable for retention (i.e. 'U' category). With regard to Table A it should be noted that tree quality and value is categorised within the existing context without taking into account any site development related issues, but that the recommendations for works take the proposal into consideration where there are clearly definable potential impacts upon trees.

Table A: BS5837-2012 Retention Categories of the Surveyed Vegetation

	Retention Categories	Tree/ Group/Woodland Hedge Numbers	Totals
Those of a high quality that should be afforded appropriate consideration in the context of development	'A'	T22, W1, W2, W2	*1 Tree 3 Woodlands*
Those of a moderate quality that should be afforded appropriate consideration in the context of development	'B'	T3, T10, T11, T23	*4 Trees*
Those of a low quality that should be afforded appropriate consideration in the context of development	'C'	T1, T2, T4, T5, T6, T7, T12, T13, T14, T16, T17, T20, T21, T24, T25, T27, G1, G2, H1	*16 Trees 2 Groups 1 Hedge*
Those considered unsuitable for retention	'U'	T8, T9, T15, T18, T19, T26	*6 Trees*
			= 27 Trees, 2 Groups, 3 Woodlands & 1 Hedge in Total

The Proposal's Projected Impacts on Trees. As detailed in Table B (below), and on the appended TIP, implementation of the proposed development is projected to require the removal of a total of seven individual low quality 'C' category trees and one 'C' category group. However, as these trees are located internal to the site their removal is projected to have a negligible impact upon the visual amenity of the local landscape. In addition, six trees are considered unsuitable for retention and should therefore be removed in accordance with prudent arboricultural management regardless of the proposals.

Table B: Arboricultural Impacts of Proposed Development & Other Tree Removal Proposals

	Ret. Cats.	Removals necessary to implement development	Removals suggested for non-development related reasons	Total no. of tree removals
Those of a high quality that should be afforded appropriate consideration in the context of development	'A'	-	-	-
Those of a moderate quality that should be afforded appropriate consideration in the context of development	'B'	-	-	-
Those of a low quality that should be afforded appropriate consideration in the context of development	'C'	T5, T6, T12, T13, T14, T20, T21, G1	-	*7 Trees 1 Group*
Those that should be removed for sound management reasons regardless of site plans	'U'	-	T8, T9, T15, T18, T19, T26	*6 Trees*
Totals		*7 Trees 1 Group*	*6 Trees*	***= 13 Trees & 1 Group in Total***

Mitigation for Projected Tree Losses. As detailed on the TIP, various locations have preliminarily been identified as being suitable for new planting with trees of suitably large growing species as part of site landscaping, the provision of which is projected to adequately mitigate for the necessary losses. Accordingly, specific tree planting proposals should be included as part of a detailed landscape proposal for the site, which can be conditioned to a planning permission.

Tree Retention Recommendations. Adequate protection of retained tree Root Protection Areas (RPAs) during construction is essential if their long-term viability is to be assured. RPAs, which are calculated through a method provided in BS5837:2012, are ground areas around trees that are to be kept free from major disturbance throughout development through the installation of temporary protective fencing to form a Construction Exclusion Zone. The TSS lists the RPAs of the individually surveyed trees as areas in square metres and as radial distances in metres from stem centres, whilst the RPAs are indicated in magenta on the TIP. A Temporary Protective Fencing Specification is attached which gives details of the type, purpose and construction of the temporary protective fencing that should be used.

In respect of the protection of the retained trees BS5837:2012 recommends that, where considered expedient, an Arboricultural Method Statement and Tree Protection Plan detailing special mitigation construction should be prepared. Essentially, the Arboricultural Method Statement and Tree Protection Plan describe the procedures, working methods and protective measures to be used in relation to retained trees in order to ensure that they are adequately protected during the construction process. The production of and adherence to an Arboricultural Method Statement and Tree Protection Plan can be conditioned as part of a planning approval.

In addition to the points raised herein I would also emphasise the importance of ensuring that all relevant recommendations included under the General Recommendations section at page 4 be followed accordingly.

Summary and Conclusions. 27 individual trees, two groups of trees, three woodlands, and one hedge were surveyed in respect of a proposal to construct four detached residential properties at the subject site.

One tree and the three woodlands were allocated high retention values, four trees were allocated moderate retention values, and 16 trees, the two groups and the hedge were allocated low retention values. In addition, six trees are considered unsuitable for retention in the context of current usage and should therefore be considered for removal in accordance with prudent arboricultural management.

An evaluation of the proposals has indicated that it will be necessary to remove a total of seven low quality trees and one low quality group in order to implement the proposed development. However, the evaluation also determines that, as these trees are located internal to the site, their loss is projected to have a negligible impact upon the visual amenity of the local landscape, and that their removal can be adequately mitigated for through new planting, the provision and implementation of which can be conditioned to a planning approval.

The evaluation also indicates that the development can be achieved whilst retaining and protecting the majority of the existing trees, but that it is imperative that any subsequent planning approval includes a suitably worded condition regarding the specifics of how such tree retention is to be successfully executed (i.e. through the provision of a Tree Protection Plan and an Arboricultural Method Statement and the erection of Temporary Protective Fencing around RPAs).

In consideration of the above findings I therefore conclude that, from the details provided to date, the subject site can be developed as proposed whilst both retaining the existing visually important trees and improving the overall quality of the tree cover. However, in order to ensure successful existing tree preservation, it is essential that the retained trees are protected in strict accordance with current Government guidance and the recommendations included herein.

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Chartered Arboriculturist

Bowland Tree Consultancy Ltd

GENERAL RECOMMENDATIONS

Non-Development Related Tree Works and Recommendations. Any general management pruning works for retained trees that are stated to be non-development related, as detailed in the TSS, are recommended in accordance with prudent arboricultural management and should therefore be carried out regardless of any site plans and potential changes in land usage. All tree works should be carried out in accordance with BS3998:2010 - Tree Work – Recommendations.

Tree Work Related Consents. No tree pruning or removal works should commence on site until necessary consents have been obtained from the LPA as part of a planning approval or in respect of any statutory tree protection.

Protected Species. Hedges, climbing plants, shrubs and trees should be inspected for birds' nests prior to any clipping, pruning or removal works, and any work likely to destroy or disturb active nests should be avoided until the young have fledged. All personnel carrying out tree works should also be vigilant of the possibility that roosting bats may be present in trees and, if any bat roosts are identified, then it is essential that works are halted immediately and that a suitably qualified and experienced ecologist investigate prior to works continuing.

Arboricultural Contractors. All tree works should be carried out by suitably qualified and experienced arboricultural contractors carrying appropriate public liability insurance cover and be implemented to the minimum current CE and UK industry standards and in accordance with industry codes of practice. Only certificated personnel should, in accordance with The Control of Pesticides Regulations, apply any pesticides.

Contractors and Subsequently Identified Tree Defects. Contractors should be made aware that, should any significant tree defects become apparent during operations that would not have been immediately obvious to the surveyor, then such defects should be notified immediately to the client and subsequently confirmed to the consultant within five working days.

New Tree Planting. Where trees are removed in order to facilitate construction then new tree planting proposals should be included as part of the landscape design plan for the site. All tree planting should be carried out in accordance with BS4428:1989 - Code of Practice for General Landscape Operations, BS3936-1:1992, Nursery Stock – Part 1: Specification for Trees and Shrubs and BS4043:1989, Transplanting Root-Balled Trees where applicable.

Retained Tree Management. Any tree risk management appraisal and subsequent recommendations made in this report were based on observations and site circumstances at the time of my survey. Trees are dynamic living organisms whose structure is constantly changing and even those evidently in good condition can succumb to damage and/or stress. In this respect I would note that, under the Occupiers' Liability Act (1957 & 1984), site occupants have a duty of care to take reasonable steps to prevent or minimise the risk of personal injury and/or damage to property from any tree located within the curtilage of the land they occupy. It is accepted that these steps should normally include commissioning a qualified and experienced arboriculturist to survey their trees in order to identify any risk of harm to persons or damage to property that they may present and, where unacceptable risks are identified, taking suitable remedial action to negate those risks.

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DISCLAIMER

Survey Limitations: Unless otherwise stated all trees are surveyed from ground level using non-invasive techniques, in sufficient detail to gather data for and inform the design of the current project only. The disclosure of hidden crown and stem defects, in particular where they may be above a reachable height or where trees are ivy clad or in areas of ground vegetation, cannot therefore be expected. All obvious defects, however, are reported. Detailed tree safety appraisals are only carried out under specific written instructions. Comments upon evident tree safety relate to the condition of said tree at the time of the survey only. Unless otherwise stated all trees should be re-inspected annually in order to appraise their on-going mechanical integrity and physiological condition. It should, however, be recognised that tree condition is subject to change, for example due to the effects of disease, decay, high winds, development works, etc. Changes in land use or site conditions (e.g. development that increases access frequency) and the occurrence of severe weather incidents are also significant considerations with regards tree structural integrity and trees should therefore be re-assessed in the context of such changes and/or incidents and inspected at intervals relative to identified and varying site conditions and associated risks.

Where trees are located wholly or partially on neighbouring private third-party land then said land is not accessed and our inspection is therefore restricted to what can reasonably be seen from within the site. Stem diameters of trees located on such land are estimated. Any subsequent comments and judgments made in respect of such trees are based on these restrictions and are our preliminary opinion only. Recommendations for works to neighbouring third-party trees are only made where a potential risk to persons and/or property has been identified during our survey or, if applicable, where permissible works are required to implement a proposed development. Where significant structural defects of third-party trees are identified and associated management works are considered essential to negate any risk of harm and/or damage then we will first attempt to inform the site occupier of the issues and, if not possible, then inform the relevant Council. Where a more detailed assessment is considered necessary then appropriate recommendations are set out in the Tree Survey Schedule.

Where tree stem locations are not included on the plan(s) provided then they are plotted at the time of the survey using, where appropriate and/or practicable, a combination of measurement triangulation and GPS co-ordination. Where this is not possible then locations are estimated. Restrictions in these respects are detailed in the report.

The tree survey and any report information provided is intended as a guide to identify key tree related constraints to site development only. As such, the potential influence of trees upon existing or prosed buildings or other structures resulting from the effects of their roots abstracting water from shrinkable load-bearing soils is not considered herein. The tree survey information in its current form should not therefore be considered sufficient to determine appropriate foundation depths for new buildings. Accordingly, an updated survey, with reference to the current NHBC Standards Chapter 4.2 - Building Near Trees, must therefore be prepared for the specific purpose of informing suitable foundation depths subsequent to planning approval being granted. The advice of a structural engineer must also be sought with regard to appropriate foundation depths for new buildings.

Third Parties: Any disclosure of this document to a third party is subject to this disclaimer. The report was prepared by Bowland Tree Consultancy Ltd at the instruction of and for use by our client, as named. This report does not in any way constitute advice to any third party who is able to access it by any means. Bowland Tree Consultancy Ltd excludes to the fullest extent lawfully permitted all liability whatsoever for any loss or damage arising from reliance on the contents of this report.

TREE SURVEY SCHEDULE & BS5837:2012 'TABLE 1'

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT & PROTECTION APPRAISAL			
Site:	Bennetts Close, Wiswell Lane, Whalley, Lancashire, BB7 9AF	**Surveyor:**	Phill Harris – Chartered Arboriculturist
Agent for Client:	Avalon Town Planning	**Survey Date:**	26 July 2013
		Job Reference:	BTC514

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
T1	Sycamore	19.5	740	N 8 E 8 S 8 W 8	3.5-S 3	M	G	▪ Stem bifurcates into primary branches at a height of approximately 2.5m with a tight fork, with extensive bark necrosis below. ▪ Carry out risk assessment.	▪ Protect Root Protection Area (RPA) throughout development process.	10+	C1	248	8.88
T2	Willow-Leafed Pear	4	190	N 2.5 E 2.5 S 2.5 W 2.5	N/A 0	Y	G	▪ No visible structural defects.	▪ Retain in context of development proposals. ▪ Protect RPA throughout development process.	40+	C1	16	2.28
T3	Weeping Cherry	2.5	250	N 2.5 E 2.5 S 2.5 W 2.5	N/A 0	EM	G	▪ No visible structural defects.	▪ Retain in context of development proposals. ▪ Protect RPA throughout development process.	20+	B1/2	28	3
T4	Hawthorn	7	240	N 2.5 E 2.5 S 2.5 W 2.5	N/A 2	SM	P	▪ Crown showing signs of a substantial reduction in vitality with small leaves and very sparse foliage cover.	▪ Retain in context of development proposals. ▪ Protect RPA throughout development process.	10+	C1/2	26	2.88
T5	Silver Maple	7	2x150 1x100 2x50 (ms)	N 3.5 E 3.5 S 3.5 W 3.5	N/A 0.5	SM	G	▪ Multi-stemmed from ground level with acute included bark unions.	▪ Remove in order to construct development as proposed. ▪ Grub out stump.	10+	C1/2	27	2.94
T6	Weeping Birch	4.5	70	N 1.5 E 1.5 S 1.5 W 1.5	N/A 0	Y	G	▪ Stem curvature.	▪ Remove in order to construct development as proposed. ▪ Grub out stump.	40+	C1/2	2	0.84
T7	Ash	24	820	N 7 E 5 S 5 W 7.5	5-W 0.5	PM	P	▪ Dense ivy up lower stem. ▪ Crown showing signs of a substantial reduction in vitality. ▪ Has sustained several previous branch failures up to approximately 200mm diameter.	▪ Retain in context of development proposals. ▪ Protect RPA throughout development process. ▪ Sever ivy at base of stem.	10+	C1/2	304	9.84

Headings and Abbreviations:

No. Allocated sequential reference number - Tree ('T'), Group ('G'), Woodland ('W') or Hedge ('H') reference number - refer to plan and to numbered tags where applicable
Species: Common name
Height: In metres, to half nearest metre – where possible approximately 80% are measured using an electronic clinometer and the remainder estimated against the measured trees. In the case of Groups and Woodlands the measurement listed is that of the highest tree
Stem Diam.: Stem diameter in millimetres, to nearest 10mm - measured and calculated as per Annex C of BS5837:2012. MS = multi-stemmed, TS = twin-stemmed
Branch Spread: Crown radius measured (or estimated where considered appropriate) from the four cardinal points (north, east, south and west) to give an accurate visual representation of the crown
Branch & Canopy Clearances: Existing height above ground level, in metres, of first significant branch and direction of growth (e.g. 2.5-N) and of canopy at lowest point – to inform on crown to height ratio, potential for shading, etc.
Life Stage: Estimated age class - Y = young, SM = semi-mature, EM = early-mature, M = mature, PM = post-mature
PC: Physiological Condition - a measure of the tree's(s') overall vitality, i.e. D = Dead, MD = Moribund, P = Poor, M = Moderate, G = Good
General Observations and Comments: Comments relating to the tree's(s') overall condition and any other pertinent factors including structural defects, current and potential direct structural damage, physiological decline, poor form, etc.
Management Recommendations: Either Preliminary or In Consideration of the Proposal - In the case of Arboricultural Constraints Surveys the recommended management works only take existing site and tree circumstances and conditions into account and not proposed developments. Arboricultural Impact Assessment and Method Statement related Surveys take the proposed development into consideration with recommendations made accordingly. More than one option may be given if considered appropriate
ERC: Estimated Remaining Contribution - in years as per BS5837:2012 (i.e. <10, 10+, 20+, 40+)
Cat. Grade: Category Grading - tree retention value listed as U, A, B or C - in accordance with BS5837:2012 Table 1
RPA m²: Root Protection Area in m² - calculated area around the tree that must be appropriately protected throughout the development process in order avoid root damage
RPA Radius (m): Root Protection Area Radius - in metres measured from the centre of the stem to the line of tree protection
 # (Estimated Dimensions): Where trees are located off-site, or are inaccessible for any other reason, and accurate measurements or other information cannot be taken then the information provided is estimated and is duly suffixed with a '#' symbol

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT & PROTECTION APPRAISAL		Surveyor:	Phill Harris – Chartered Arboriculturist	Page: 2 of 5
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No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
T8	Silver Birch	14	490	N 1.5 E 4.5 S 9 W 2	4-S 0	M	P	▪ Has previously sustained upper stem failure. ▪ Short projected remaining structurally sound life expectancy.	▪ Remove due to short projected remaining structurally sound life expectancy. ▪ Grub out stump.	<10	U	109	5.88
T9	Sycamore	14	600	N 7 E 6.5 S 6 W 6.5	3.5 3	EM	MD	▪ Large areas of necrotic bark up lower stem. ▪ Crown showing signs of a significant and evidently progressive reduction in vitality with very small leaves and very sparse foliage cover. ▪ In decline with short projected remaining life expectancy.	▪ Remove due to short projected remaining life expectancy. ▪ Grub out stump.	<10	U	163	7.2
T10	Ash	13.5	510	N 8 E 5 S 8 W 8.5	2-S 1	EM	G	▪ No visible structural defects.	▪ Retain in context of development proposals. ▪ Protect RPA throughout development process.	40+	B1/2	118	6.12
T11	Ash	25	900	N 16.5 E 13 S 9 W 8	5-N 3	PM	G	▪ Standing to edge of woodland W2. ▪ Very dense ivy up stem and into branches. ▪ Has evidently sustained several previous branch failures of up to approximately 250mm diameter.	▪ Retain in context of development proposals. ▪ Protect RPA throughout development process. ▪ Sever ivy at base of stem.	20+	B1/2	366	10.8
T12	Hybrid Black Poplar	27	540	N 5.5 E 5 S 5.5 W 4.5	3 0	EM	G	▪ Moderately severe mid-stem curvature.	▪ Remove in context of development proposals. ▪ Treat stump with suitable herbicide to prevent re-growth.	10+	C1	132	6.48
T13	Hybrid Black Poplar	28	580	N 9 E 8 S 7 W 7	8 4	EM	M	▪ Moderate stem lean to north. ▪ Crown showing signs of a reduction in vitality with very small leaves and slightly sparse foliage cover.	▪ Remove in context of development proposals. ▪ Treat stump with suitable herbicide to prevent re-growth.	10+	C1	152	6.96
T14	Hybrid Black Poplar	28	750	N 10.5 E 10 S 7 W 4	7-N 5	EM	M	▪ Moderate stem lean to north. ▪ Crown showing signs of a moderate reduction in vitality with moderately small leaves.	▪ Remove in context of development proposals. ▪ Treat stump with suitable herbicide to prevent re-growth.	10+	C1	254	9.
T15	Hybrid Black Poplar	25.5	500	N 3 E 3 S 3 W 3	N/A N/A	EM	MD	▪ Large number of bacterial cankers up stem. ▪ In mid to late stages of decline with short projected remaining life expectancy.	▪ Remove due to short projected remaining life expectancy. ▪ Treat stump with suitable herbicide to prevent re-growth.	<10	U	113	6
T16	Wild Cherry	12.5	310	N 4.5 E 4.5 S 4.5 W 4.5	3 1	SM	P	▪ Crown showing signs of a substantial reduction in vitality with small leaves and sparse foliage cover.	▪ Retain in context of development proposals. ▪ Protect RPA throughout development process.	10+	C1	43	3.72

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Agent for Client:	Avalon Town Planning	Job Reference:	BTC514	

No.	Species	Height	Stem Diam.	Branch Spread		Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m^2)	RPA Radius (m)
T17	Wild Cherry	7	1x110 1x100 1x90 1x80 (ms)	N E S W	2 2 2 2	N/A 1	SM	M	▪ Stem divides into multiple primary branches at a height of approximately 0.7m with included bark unions.	▪ Retain in context of development proposals. ▪ Protect RPA throughout development process.	10+	C1	17	2.3
T18	Pear	16	500	N E S W	4 4 5 5	2.5 7	M	MD	▪ Crown showing signs of a significant and evidently progressive reduction in vitality with small leaves and very sparse foliage cover. ▪ Short projected remaining life expectancy.	▪ Remove due to short projected remaining life expectancy. ▪ Grub out stump.	<10	U	113	6
T19	Pear	11	400	N E S W	3.5 3.5 3.5 3.5	2	EM	D	▪ Dead.	▪ Remove. ▪ Grind out stump.	<10	U	72	4.8
T20	Sargent Cherry	4.5	210	N E S W	3 3 2.5 2	2 2	SM	M/P	▪ Crown showing signs of a reduction in vitality with moderately sparse foliage cover and substantial number of dead leaves.	▪ Remove in order to widen access as proposed. ▪ Grub out stump.	10+	C1	20	2.52
T21	Ash	12	2x120 1x110 (ms)	N E S W	3.5 3.5 3.5 3.5	N/A 3	Y	G	▪ Four stems arise at ground level.	▪ Remove in order to widen access as proposed. ▪ Grub out stump.	10+	C1	24	2.76
T22	Copper Beech	21	720	N E S W	8 7 9 9	3 0	M	G	▪ Upright primary branch arises from stem at a height of approximately 2m, and is fused to stem above union.	▪ Retain in context of development proposals. ▪ Protect RPA throughout development process.	40+	A1/2	235	8.64
T23	Horse Chestnut	17	550	N E S W	5 5 10 7	3 0.5	EM	G	▪ Slightly biased crown to south.	▪ Retain in context of development proposals. ▪ Protect RPA throughout development process.	40+	B1/2	137	6.6
T24	Variegated Holly	5.5	1x120 1x90 (ts)	N E S W	2.5 2.5 2.5 2.5	N/A 0	SM	G	▪ Two stems arise at ground level.	▪ Retain in context of development proposals.	10+	C1	10	1.8
T25	Lawson Cypress	9.5	240	N E S W	2.5 2.5 2.5 2.5	N/A 3	SM	G	▪ Stem trifurcates into upright primary branches a height of approximately 2m with acute included bark unions.	▪ Retain in context of development proposals.	10+	C1	26	2.88

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No.	Species	Height	Stem Diam	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
T26	Holly	11	1x200 1x180 (ts)	N 3 E 2.5 S 0.5 W 3	N/A 2	SM	M/P	▪ Two stems arise at ground level. ▪ Crown showing signs of a significant and evidently progress progressive reduction in vitality with small leaves and very sparse foliage cover. ▪ Short projected remaining life expectancy.	▪ Remove due to short projected remaining life expectancy. ▪ Treat stump with suitable herbicide to prevent re-growth.	<10	U	33	3.23
T27	Silver Birch	19.5	440	N 2 E 3 S 5 W 4	4-W 6	EM	M	▪ Moderate lower stem curvature. ▪ Crown showing signs of a reduction in vitality with moderately small leaves.	▪ Retain in context of development proposals. ▪ Protect RPA throughout development process.	10+	C1	88	5.28
G1	3no. Apple	≤ 7	≤ 330	N ≤ 4 E ≤ 5 S ≤ 5 W ≤ 3	N/A ≥ 1	EM	P-M	▪ Loose group. ▪ Crowns showing signs of a variable reduction in vitality.	▪ Remove in order to form access as proposed. ▪ Grub out stumps.	10+	C1	≤ 49	≤ 3.96
G2	1no. Sycamore, 1no. Ash	≤ 10	≤ 2x100 (ts)	N ≤ 2 E ≤ 2 S ≤ 4 W ≤ 2	N/A ≥ 1.5	Y	G	▪ Growing with stems abutted together. ▪ Ash is considered to be poorer quality than Sycamore.	▪ Remove Ash and treat stump with suitable herbicide to prevent regrowth. ▪ Retain Sycamore in context of development proposals. ▪ Protect RPA throughout development process.	10+	C1	≤ 9	≤ 1.7
W1	Norway Maple, Ash	≤ 20.5	≤ 600#	N ≤ 9.5 E ≤ 9.5 S ≤ 9.5 W ≤ 9.5	N/A ≥ 0	SM- EM	G	▪ Woodland belt running along road frontage. ▪ Located within neighbouring highway verge land and therefore not inspected in detail. ▪ Evidently marginally dominated by Norway Maple.	▪ Protect RPA throughout development process.	40+	A1/2	≤ 163	≤ 7.2
W2	Beech, Common Alder, Sycamore, Ash, Oak, Wych Elm, Hawthorn, etc.	≤ 23	≤ 700#	N ≤ 8 E ≤ 8 S ≤ 8 W ≤ 8	N/A ≥ 0	Y-M	G	▪ Woodland belt running along stream with steep bankings down to water course. ▪ Ownership unclear, with woodland possibly located partially outside site boundaries. ▪ Not inspected in detail due to steep ground terrain. ▪ Well established with mature trees in several parts. ▪ Other parts are relatively young. ▪ Long-term management is essential for the continuity of the woodland belt. The responsibility for this management in respect of the woodland's ownership should be therefore be considered in the planning stages.	▪ Protect RPA throughout development process. ▪ Clarify ownership. ▪ Consider responsibility for long-term woodland management.	40+	A1/2	≤ 222	≤ 8.4

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT & PROTECTION APPRAISAL	
Site:	Bennetts Close, Wiswell Lane, Whalley, Lancashire, BB7 9AF
Agent for Client:	Avalon Town Planning

Surveyor:	Phill Harris – Chartered Arboriculturist
Survey Date:	26 July 2013
Job Reference:	BTC514

No.	Species	Height	Stem Diam	Branch Spread		Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m^2)	RPA Radius (m)
W3	Ash, Oak, Yew, Lawson Cypress, Sycamore, Wych Elm, Hazel, etc.	≤ 20	≤ 750#	N E S W	≤ 9 ≤ 9 ≤ 11.5 ≤ 9	N/A ≥ 0	Y-M	G	▪ Well established woodland belt running along road frontage. ▪ Ownership unclear, with woodland possibly located outside site boundaries. ▪ Not inspected in detail. ▪ Ash is dominant. ▪ Long-term management is essential for the continuity of the woodland belt. The responsibility for this management in respect of the woodland's ownership should be therefore be considered in the planning stages.	▪ Protect RPA throughout development process. ▪ Clarify ownership. ▪ Consider responsibility for long-term woodland management.	40+	A1/2	≤ 254	≤ 9
H1	Hawthorn	≤ 3	≤ 50#	≤ 4 wide		N/A ≥ 0	Y	G	▪ Overgrown hedge along boundary fence. ▪ Located on neighbouring land and therefore not inspected in detail.	▪	40+	C1	N/A	≤ 0.6

BS5837:2012 Table 1 – Cascade Chart for Tree Quality Assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	▪ Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) ▪ Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline ▪ Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *Note: Category U trees can have existing or potential conservation value which it might be desirable to preserve; see BS5837:2012 paragraph 4.5.7.*			Red
	1 **Mainly arboricultural qualities**	**2** **Mainly landscape qualities**	**3** **Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Green
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	Blue
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	Grey

- TEMPORARY PROTECTIVE FENCING SPECIFICATION -

Construction Exclusion Zones (CEZs), enclosed by **Temporary Protective Fencing**, as detailed below and to be agreed with the Local Planning Authority (LPA), shall:

1. be retained in place throughout the development process, as specified in the 'Temporary Protective Fencing Construction' section below and detailed in BS5837:2012 Figure 2 (overleaf);
2. be sited in the area defined on the Tree Protection Plan (TPP);
3. be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project;
4. preclude any delivery of site accommodation and/or materials and/or plant machinery;
5. preclude all construction related activity, with the sole exception of specified arboricultural works and any other works to be carried out under supervision that have been agreed by all parties; and
6. preclude the storage of all development related materials and substances including fuels, oils, additives, cement and/or any other deleterious substance.

Any incursion into CEZs must be by prior arrangement, following consultation with the LPA.

Temporary Protective Fencing Construction

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall butt together and be securely fixed to a scaffold framework, as per 3 to 5 below.
3. The scaffold framework shall comprise of upright poles of at least 3.0 metres in length driven no less than 0.6 metres into the ground at maximum 3.0 metre centres with horizontal and diagonal poles fixed to the uprights, as per 4 to 5 below.
4. The two horizontal rail poles shall be attached to the uprights at heights of 0.6 and 1.8 metres with 3 no. clamps to each joint.
5. The diagonal scaffold pole struts be clamped to the top rail of the scaffold framework at a 45° angle and extend back into the CEZ and clamped to a 0.7 metre length of scaffold tube that shall be driven no less than 0.5m into the ground.
6. No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.
7. A 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1, below) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist shall inspect the Temporary Protective Fencing.

Figure 1: CEZ Warning Sign

– TREE PROTECTION AREA –
KEEP OUT!

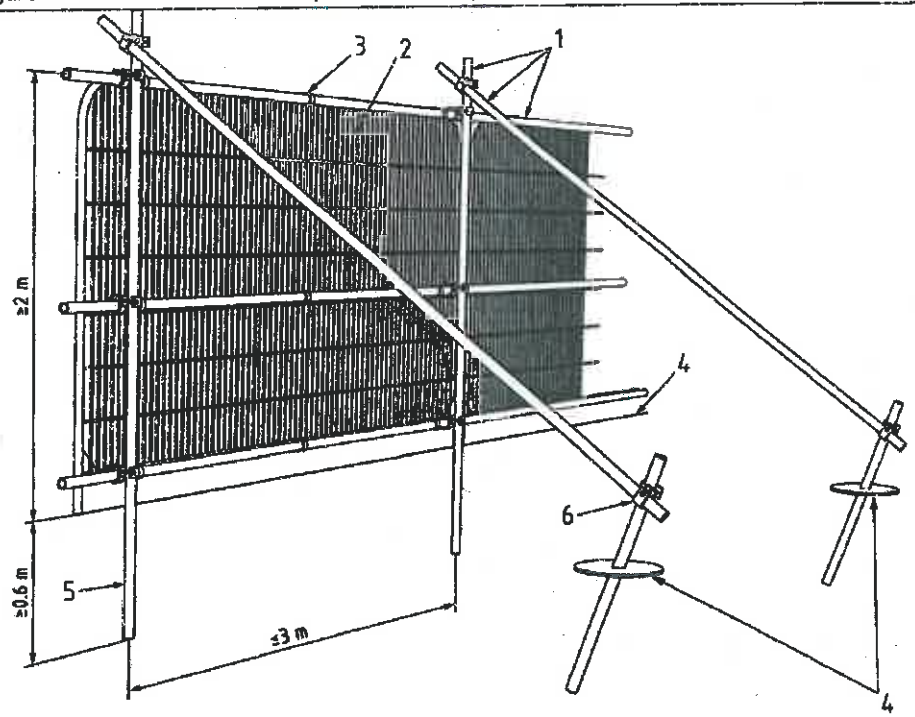
(TOWN & COUNTRY PLANNING ACT 1990)
THE TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR SUBJECTS OF A 'TREE PRESERVATION ORDER', THE CONTRAVENTION OF WHICH MAY LEAD TO CRIMINAL PROSECUTION

THE FOLLOWING MUST BE OBSERVED BY ALL PERSONNEL:

- **THE PROTECTIVE FENCING MUST NOT BE MOVED**
- **NO PERSON SHALL ENTER THE CONSTRUCTION EXCLUSION ZONE**
- **NO MACHINE, PLANT OR VEHICLES SHALL ENTER THE EXCLUSION ZONE**
- **NO MATERIALS SHALL BE STORED IN THE EXCLUSION ZONE**
- **NO SPOIL SHALL BE DEPOSITED IN THE EXCLUSION ZONE**
- **NO EXCAVATION SHALL OCCUR IN THE EXCLUSION ZONE**
- **NO FIRES SHALL BE LIT IN THE EXCLUSION ZONE**

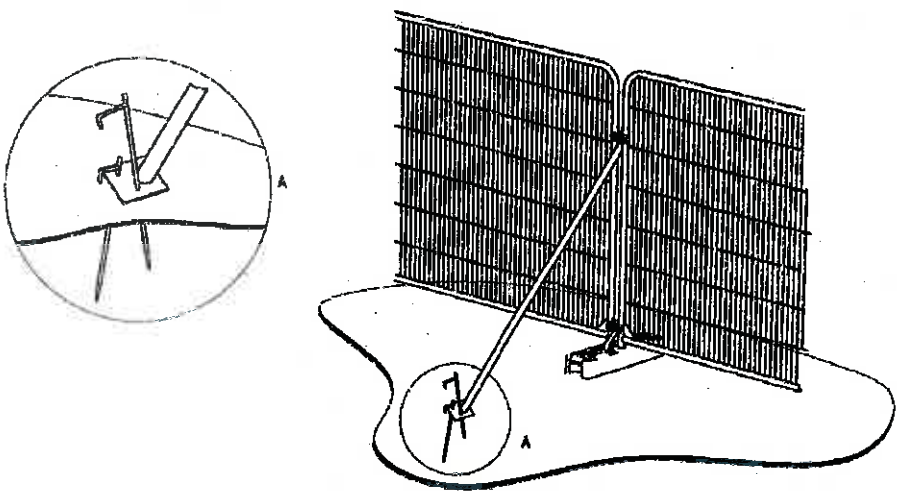
ANY INCURSION INTO THE EXCLUSION ZONE MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

Figure 2: BS5837:2012 Default specification for protective barrier

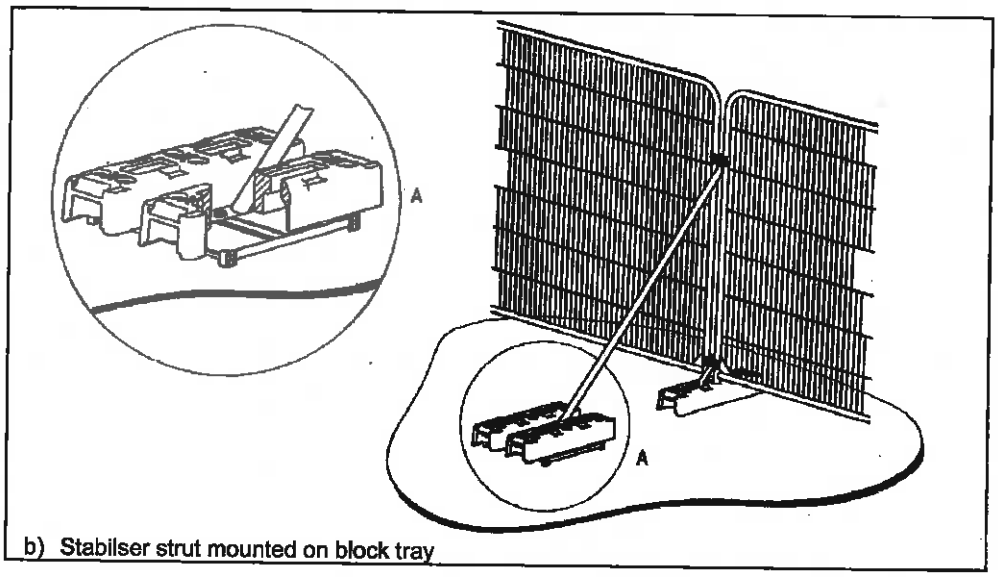


Key
1. Standard scaffold poles.
2. Heavy gauge 2 metre tall galvanised tube and welded mesh infill panels
3. Panels secured to uprights and cross members with wires ties
4. Ground level
5. Uprights driven into the ground until secure (minimum depth 0.6 metres)
6. Standard scaffold clamps

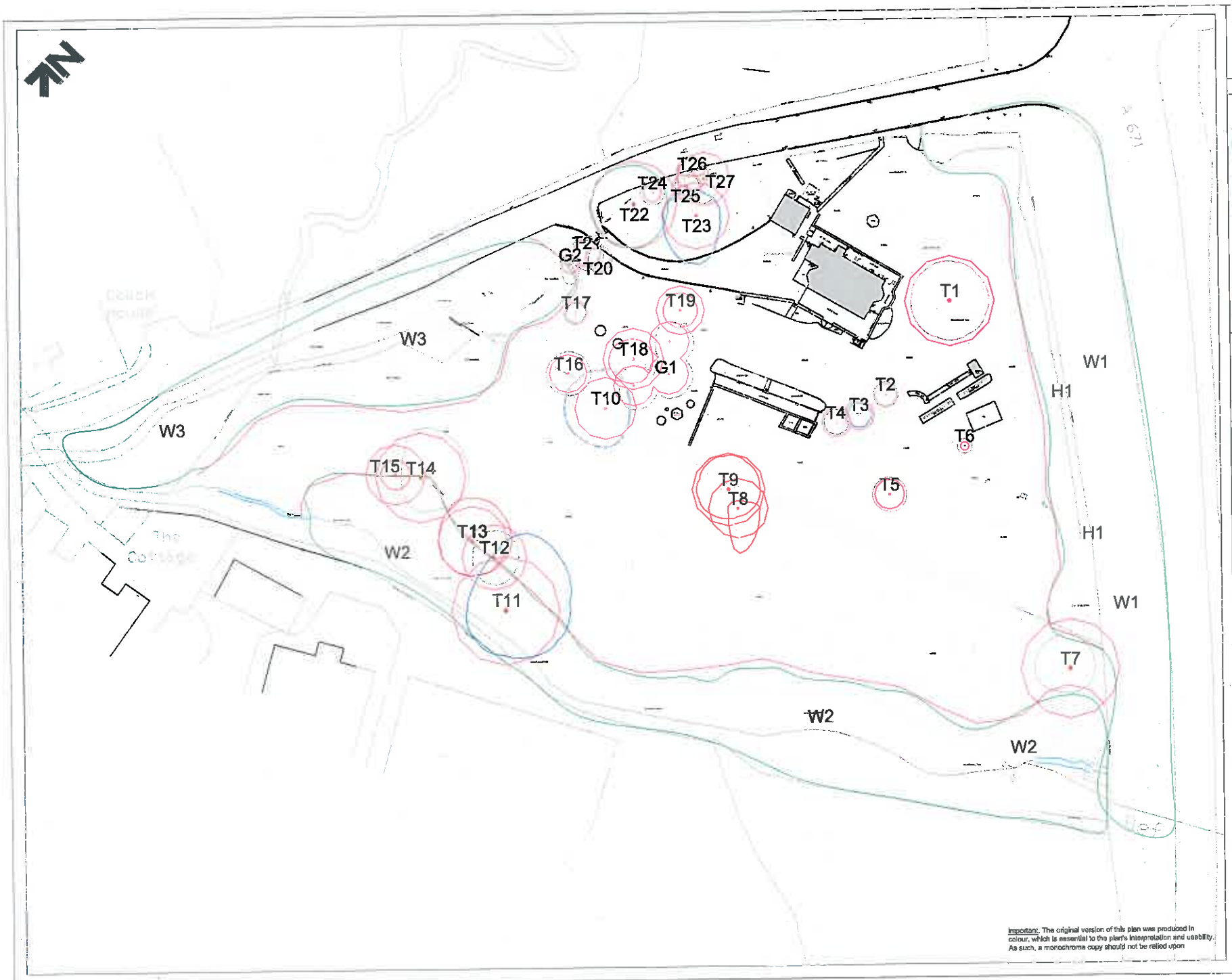
Figure 3: BS5837:2012 Examples of above-ground stabilising systems



a) Stabilser strut with base plate secured with ground pins



b) Stabilser strut mounted on block tray



KEY

T = Surveyed Individual Tree
G = Surveyed Group of Trees
W = Surveyed Woodland
H = Surveyed Hedge

Please refer to associated Arboricultural Impact Assessment Report for specific details in respect of items below:

Tree Categorisations:

Trees to be Considered for Retention:

Category 'A' Tree/Group/Wood/Hedge
Those of a High Quality with an Estimated Remaining Life Expectancy of at Least 40 Years

Category 'B' Tree/Group/Wood/Hedge
Those of a Moderate Quality with an Estimated Remaining Life Expectancy of at Least 20 Years

Category 'C' Tree/Group/Wood/Hedge
Those of Low Quality with an Estimated Remaining Life Expectancy of at Least 10 Years, or Young Trees

Trees Unsuitable for Retention:

Category 'U' Tree/Group/Wood/Hedge
Those in Such a Condition that they Cannot Realistically be Retained as Living Trees in the Context of the Current Land Use for Longer Than 10 Years

Note. The stem locations of trees T12 and T21 were not included on the topographical survey plan for the site and were subsequently plotted by the arboricultural surveyor by a combination of GPS and triangulation from existing site features where possible and estimation where not. As such, the stem locations of these trees and the locations and extents of the groups around them can be considered to be exact, and this should be taken into consideration when planning for tree retention within the context of the design proposal.

Root Protection Areas (RPAs):

RPAs
Area(s) of Ground Around Trees that Should be Protected Throughout Development Works with Protective Fencing to form a Construction Exclusion Zone

Important. The original version of this plan was produced in colour, which is essential to the plan's interpretation and usability. As such, a monochrome copy should not be relied upon

Project:
BENNETTS CLOSE
WISWELL LANE
WHALLEY
LANCASHIRE
BB7 9AF

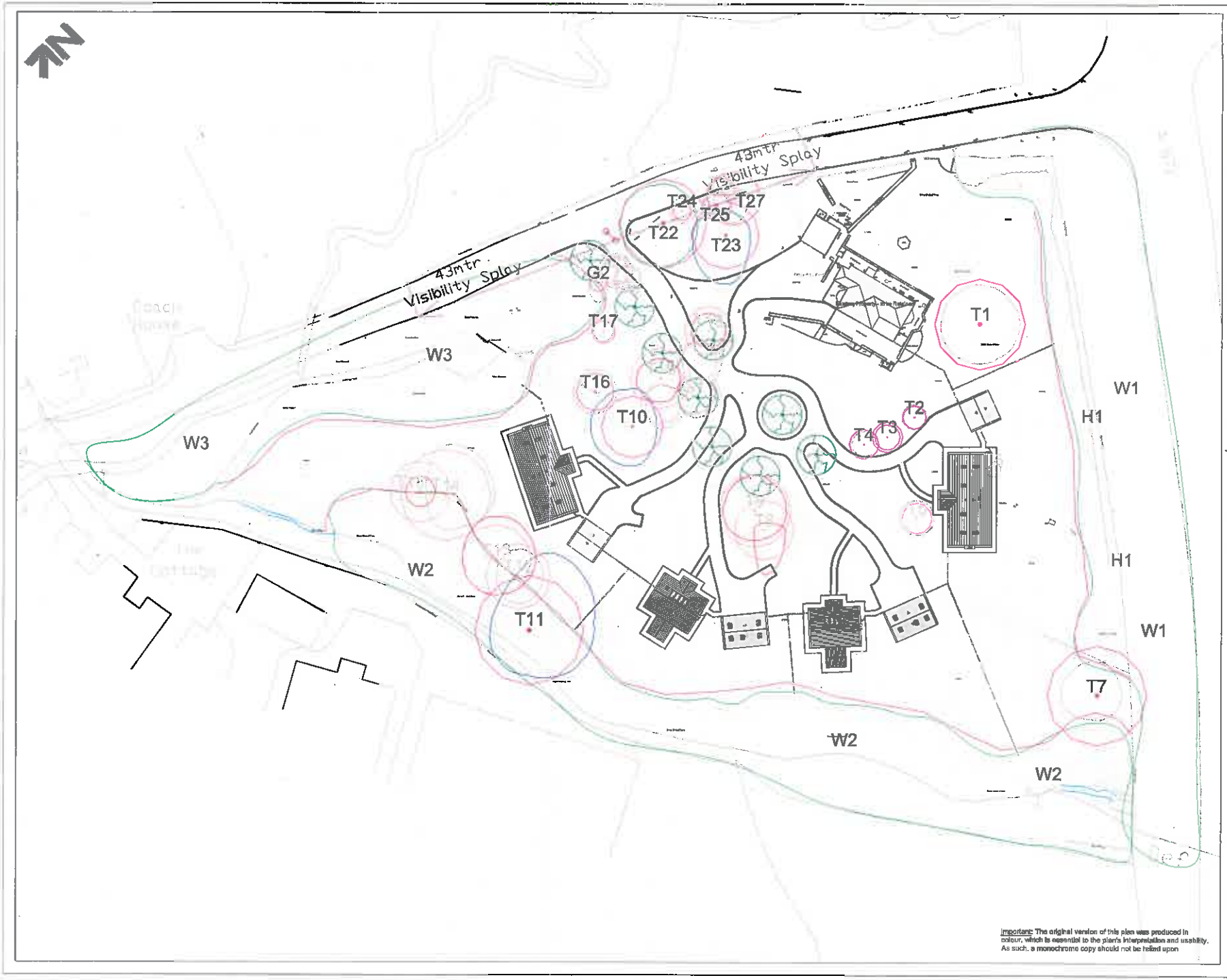
Agent for Client:
AVALON TOWN PLANNING

Title:
TREE CONSTRAINTS PLAN
In Relation to Proposed Residential Development of 4no. Detached Units

Scale: 1:500@A2
Date: July 2013
Drawn by: PH

Bowland Tree Consultancy Ltd
e: info@bowlandtreeconsultancy.co.uk
t: 01200 441117

Ref: BTC514-TCP Rev:



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Note 2: Trees with their numbers denoted in light grey are proposed recommended for removal

Root Protection Areas (RPAs):

RPAs
Areas of Ground Around Trees that Should be Protected Throughout Development Work with Protective Fencing to form a Construction Exclusion Zone

New Tree Planting:

Approximate Locations Considered Suitable for New Planting with Trees of Appropriate Species, as Part of a Site Landscaping Scheme

Project:
BENNETTS CLOSE
WISWELL LANE
WHALLEY
LANCASHIRE
BB7 9AF

Agent for Client:
AVALON TOWN PLANNING

Title:
TREE IMPACT PLAN
In Relation to Proposed Residential Development of 4no. Detached Units

Scale:	1:500@A2
Date:	August 2013
Drawn by:	PH

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Ref: BTC514-TIP Rev: